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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: MARUTA, Yukio, et al.

Group Art Unit: 2822

Serial No.: 10/708,587

Examiner: Kevin M. PICARDAT

Filed: March 12, 2004

P.T.O. Confirmation No.: 2586

FOR: **METHOD AND DEVICE FOR CUTTING WIRE FORMED ON SEMICONDUCTOR  
SUBSTRATE**

**AMENDMENT UNDER 37 CFR §1.111**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

September 28, 2005

Sir:

In response to the Office Action dated June 30, 2005, please amend the above-identified application as follows:

**Amendments to the Claims** are reflected in the listing of claims which begins on page 2 of this paper.

**Remarks/Arguments** begin on page 8 of this paper.

IPW  
Fee  
6h/s

REMARKS

Applicants acknowledge the allowability of Claims 3, 8 and 12 which have been amended to be in independent form and are now believed to be allowable.

The remaining claims have been amended to clarify the present invention.

Claim 1, as now amended, is to a method for cutting a wire formed on a semiconductor substrate, by forming a cut portion by scanning the semiconductor substrate with a focused ion beam to cut the wire, and forming a clear region free of stray material from the wire, horizontally continuously from the cut portion by scanning the semiconductor substrate with the focused ion beam. Claims 6, 7 and 10 have also been amended to provide for forming a redundant portion or clear region free of stray material from the wire, horizontally continuously from the cut portion.

In the Office Action, Claims 1, 2, 4-7, 9-11 and 13-16 are rejected as anticipated under 35 U.S.C. 102(b) by Itoh et al. (U.S. 5,086,015). The Office Action states that Itoh et al. shows a method for cutting a wire by forming a cut pattern by scanning a substrate with a focused ion beam to cut a wire (8) and form a clear region (8a), where the cut portion has a first cavity and the clear region is a second and third cavity, using a processor, controller and memory as the apparatus.

It should be noted, however, that Itoh does not disclose forming a clear region free of stray material from the wire, horizontally continuously from a cut portion by scanning a semiconductor substrate with a focused ion beam, as recited in each of amended independent claims 1, 6, 7 and 10, and as clearly shown in Applicants' drawings. Rather, as shown in Fig. 4 of Itoh, Itoh discloses vertically forming additional recesses 8a at end portions of the bottom of the hole 8 where the upper

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wiring conductor 2 remains, thereby removing the remained upper wiring conductor 2 caused by undulation of the conductor 2.

In view of the present amendments to the claims, claims 1, 2, 4-7, 9-11 and 13-16 are believed to be patentable and allowable in addition to claims 3, 8 and 12, and early action towards allowance thereof is respectfully requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants' undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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